

Form PTO-1449 <b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION</b> <i>(Use several sheets if necessary)</i>	Docket Number 377882001720	Application Number 09/927,884
	Applicant Gary VAN NEST et al.	
	Filing Date August 10, 2001	Group Art Unit 1645
	Mailing Date March 12, 2002	

## U.S. PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Name	Class	Subclass	Filing Date Is Appropriate
~	1.	07/03/1984	4,458,066	Caruthers et al.	—	—	

## FOREIGN PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Country	Class	Subclass	Translation YES NO	
~	2.	09/20/2001	WO 01/68077 A2	WIPO	—	—		
~	3.	09/20/2001	WO 01/68103 A2	WIPO	—	—		
~	4.	09/20/2001	WO 01/68116 A2	WIPO	—	—		
~	5.	09/20/2001	WO 01/68143 A2	WIPO	—	—		
~	6.	09/20/2001	WO 01/68144 A2	WIPO	—	—		
~	7.	10/18/2001	WO 01/76642 A1	WIPO	—	—		
~	8.	09/20/2001	WO 01/68078 A2	WIPO	—	—		
~	9.	09/20/2001	WO 01/68117 A2	WIPO	—	—		

## OTHER DOCUMENTS

(including author, title, Date, Pertinent Pages, Etc.)

Examiner Initials	Ref. No.	Title

EXAMINER: MARK NAREED

DATE CONSIDERED: 12/29/03

EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.

Form PTO-1449

INFORMATION DISCLOSURE CITATION  
IN AN APPLICATION

(Use several sheets if necessary)

Docket Number 377882001720

Application Number 09/927,884

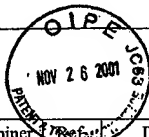
Applicant

Gary VAN NEST et al.

Filing Date: August 10, 2001

Group Art Unit 1645

Mailing Date November 13, 2001



RECEIVED  
NOV 27 2001  
TECH CENTER 1600/2900

U.S. PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Name	Class	Subclass	Filing Date if Appropriate
~	1.	07/03/1984	4,458,006	Döenges et al.	—	—	
~	2.	03/17/1987	4,650,675	Borel et al.	—	—	
~	3.	07/18/1989	4,849,513	Smith et al.	—	—	
~	4.	03/20/1990	4,910,300	Urdea et al.	—	—	
~	5.	08/14/1990	4,948,882	Ruth	—	—	
~	6.	05/14/1991	5,015,733	Smith et al.	—	—	
~	7.	03/03/1992	5,093,232	Urdea et al.	—	—	
~	8.	06/02/1992	5,118,800	Smith et al.	—	—	
~	9.	06/02/1992	5,118,802	Smith et al.	—	—	
~	10.	06/23/1992	5,124,246	Urdea et al.	—	—	
~	11.	02/21/1995	5,391,723	Priest	—	—	
~	12.	09/26/1995	5,453,496	Caruthers et al.	—	—	
~	13.	01/16/1996	5,484,596	Hanna, Jr. et al.	—	—	
~	14.	09/02/1997	5,663,153	Hutcherson et al.	—	—	
~	15.	03/03/1998	5,723,335	Hutcherson et al.	—	—	
~	16.	12/15/1998	5,849,719	Carson et al.	—	—	
~	17.	01/16/2001	6,174,872	Carson et al.	—	—	
~	18.	02/27/2001	6,194,388 B1	Krieg et al.	—	—	
~	19.	03/27/2001	6,207,646 B1	Krieg et al.	—	—	
~	20.	04/10/2001	6,214,806 B1	Krieg et al.	—	—	
~	21.	05/29/2001	6,239,116 B1	Krieg et al.	—	—	

FOREIGN PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Country	Class	Subclass	Translation YES NO
~	22.	01/29/1992	0 468 520 A2, A3	Europe	—	—	

EXAMINER: MARK NAVARD

DATE CONSIDERED: 12/29/03

EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in compliance and not considered. Include a copy of this form with next communication to applicant.

Form PTO-1449

INFORMATION DISCLOSURE CITATION  
IN AN APPLICATION

(Use several sheets if necessary)

Docket Number 377882001720

Application Number 09/927,884

Applicant

Gary VAN NEST et al.

Filing Date: August 10, 2001

Group Art Unit 1645

Mailing Date November 13, 2001

NOV 27 2001  
TECH CENTER 600/2900

RECEIVED

23.	02/01/1996	WO 96/02555 A1	WIPO			
24.	08/07/1997	WO 97/28259 A1	WIPO			
25.	04/23/1998	WO 98/16247 A1	WIPO			
26.	05/07/1998	WO 98/18810 A1	WIPO			
27.	09/03/1998	WO 98/37919 A1	WIPO			
28.	09/17/1998	WO 98/40100 A1	WIPO			
29.	11/26/1998	WO 98/52581 A1	WIPO			
30.	11/26/1998	WO 98/52962 A1	WIPO			
31.	12/10/1998	WO 98/55495 A2,A3	WIPO			
32.	12/10/1998	WO 98/55609 A1	WIPO			
33.	03/11/1999	WO 99/11275 A2,A3	WIPO			
34.	07/08/1999	WO 99/33488 A2,A3	WIPO			
35.	07/08/1999	WO 99/33868 A2,A3	WIPO			
36.	10/14/1999	WO 99/51259 A2,A3	WIPO			
37.	11/11/1999	WO 99/56755 A1	WIPO			
38.	12/09/1999	WO 99/62923 A2,A3	WIPO			
39.	02/10/2000	WO 00/06588 A1	WIPO			
40.	03/30/2000	WO 00/16804 A1	WIPO			
41.	04/20/2000	WO 00/21556 A1	WIPO			
42.	09/21/2000	WO 00/54803 A2	WIPO			
43.	10/19/2000	WO 00/61161 A2	WIPO			
44.	11/09/2000	WO 00/67023 A1	WIPO			
45.	02/22/2001	WO 01/12223 A2	WIPO			
46.	03/08/2001	WO 01/15726 A2	WIPO			
47.	04/05/2001	WO 01/22972 A2	WIPO			
48.	04/05/2001	WO 01/22990 A2	WIPO			
49.	05/25/2001	WO 01/35991 A2	WIPO			
50.	07/19/2001	WO 01/51500 A1	WIPO			
51.	08/02/2001	WO 01/54720 A1	WIPO			

## OTHER DOCUMENTS

(including author, title, date, pertinent pages, etc.)

EXAMINER:

MARK NAVARRO

DATE CONSIDERED:

12/27/03

EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.

Form PTO-1449		Docket Number 37782001720	Application Number 09/927,884
INFORMATION DISCLOSURE CITATION IN AN APPLICATION (Use several sheets if necessary)		Applicant Gary VAN NEST et al.	
		Filing Date: August 10, 2001	Group Art Unit 1645
		Mailing Date November 13, 2001	
Examiner Initials	Ref. No.	Title	
~	52.	Asanuma, H. et al. (1995). "Cross-protection against influenza virus infection in mice vaccinated by combined nasal/subcutaneous administration" <i>Vaccine</i> 13:3-5.	
~	53.	Agrawal et al. (1986). "Efficient methods for attaching non-radioactive labels to the 5' ends of synthetic oligodeoxyribonucleotides," <i>Nucleic Acids Res.</i> 14:6227-6245.	
~	54.	Ahmeida, E.T.S. Ben, (1993). "Immunopotential of local and systemic humoral immune responses by ISCOMs, liposomes and FCA: role in protection against influenza A in mice," <i>Vaccine</i> 11(13):1302-1309.	
~	55.	Atherton et al. (1981). "Synthesis of a 21-residue fragment of human proinsulin by the polyamide solid phase method," <i>Hoppe-Seylers Z. Physiol. Chem.</i> 362:833-839.	
~	56.	Ballas et al. (1996). "Induction of NK activity in murine and human cells by CpG motifs in oligodeoxynucleotides and bacterial DNA," <i>J.Immunol.</i> 157:1840-1845.	
~	57.	Benoit et al. (1987). "Peptides. Strategies for antibody production and radioimmunoassays," <i>Neuromethods</i> 6:43-72.	
~	58.	Bischoff et al. (1987). "Introduction of 5'-terminal functional groups into synthetic oligonucleotides for selective immobilization," <i>Analytical Biochemistry</i> 164:336-344.	
~	59.	Blanks et al. (1988). "An oligodeoxynucleotide affinity column for the isolation of sequence specific DNA binding proteins," <i>Nucleic Acids Res.</i> 16:10283-10299.	
~	60.	Boujrad et al. (1993). "Inhibition of hormone-stimulated steroidogenesis in cultured Leydig tumor cells by a cholesterol-linked phosphorothioate oligodeoxynucleotide antisense to diazepam-binding inhibitor," <i>Proc. Natl. Acad. Sci. USA</i> 90:5728-5731.	
~	61.	Branda et al. (1993). "Immune stimulation by an antisense oligomer complementary to the rev gene of HIV-1," <i>Biochem. Pharmacol.</i> 45:2037-2043.	
~	62.	Branda et al. (1996). "Amplification of antibody production by phosphorothioate oligodeoxynucleotides," <i>J. Lab. Clin. Med.</i> 128:329-338.	
~	63.	Braun et al. (1988). "Immunogenic duplex nucleic acids are nuclease resistant," <i>J. Immunol.</i> 141:2084-2089.	
~	64.	Brazolot Millan et al. (1998) "CpG DNA can induce strong Th1 humoral and cell-mediated immune responses against hepatitis B surface antigen in young mice," <i>Proc. Natl. Acad. Sci. USA</i> 95:15553-15558.	
~	65.	Breiteneder et al. (1989). "The gene coding for the major birch pollen allergen <i>Betv1</i> is highly homologous to a pea disease resistance response gene," <i>EMBO J.</i> 8:1935-1938.	
~	66.	Broide et al. (1998). "Immunostimulatory DNA sequences inhibit IL-5, eosinophilic inflammation, and airway hyperresponsiveness in mice," <i>J. Immunol.</i> 161:7054-7062.	
EXAMINER: MARK NAVARRO		DATE CONSIDERED: 12/29/03	
EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.			

NOV 27 2001

Form PTO-1449		Docket Number 377882001720	Application Number 09/927,884
<b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION</b> <i>(Use several sheets if necessary)</i>		Applicant Gary VAN NEST et al.	
		Filing Date: August 10, 2001	Group Art Unit 1645
		Mailing Date November 13, 2001	
67.	Broide et al. (1999). "DNA-based immunization for asthma," <i>Int. Arch. Allergy Immunol.</i> 118:453-456.		
68.	Carson et al. (1997). "Oligonucleotide adjuvants for T helper 1 (Th1)-specific vaccination," <i>J. Exp. Med.</i> 186:1621-1622.		
69.	Chace et al. (1997). "Bacterial-DNA-induced NK cell-IFN- $\gamma$ production is dependent on macrophage secretion of IL-12," <i>Clin. Immunol. and Immunopathol.</i> 84:185-193.		
70.	Chaturvedi et al. (1996). "Stabilization of triple-stranded oligonucleotide complexes: use of probes containing alternating phosphodiester and stereo-uniform cationic phosphoramidate linkages," <i>Nucleic Acids Res.</i> 24:2318-2323.		
71.	Chen et al. (1999). "Enhanced protection against a lethal influenza virus challenge by immunization with both hemagglutinin- and neuraminidase-expressing DNAs," <i>Vaccine</i> 17:653-659.		
72.	Chu et al. (1997). "CpG oligodeoxynucleotides act as adjuvants that switch on T helper 1 (Th1) immunity," <i>J. Exp. Med.</i> 186:1623-1631.		
73.	Chua et al. (1988). "Sequence analysis of cDNA coding for a major house dust mite allergen, <i>Der p 1</i> homology with cysteine proteases," <i>J. Exp. Med.</i> 167:175-182.		
74.	Chua et al. (1990). "Expression of <i>Dermatophagoides pteronyssinus</i> allergen, <i>Der p II</i> , in <i>Escherichia coli</i> and the binding studies with human IgE," <i>Int. Arch. Allergy Appl. Immunol.</i> 91:124-129.		
75.	Connolly, Bernard A. (1985). "Chemical synthesis of oligonucleotides containing a free sulphhydryl group and subsequent attachment of thiol specific probes," <i>Nucleic Acids Res.</i> 13:4485-4502.		
76.	Connolly, Bernard A. (1987). "The synthesis of oligonucleotides containing a primary amino group at the 5'-terminus," <i>Nucleic Acids Res.</i> 15:3131-3139.		
77.	Corey et al. (1987). "Generation of a hybrid sequence-specific single-stranded deoxyribonuclease," <i>Science</i> 238:1401-1403.		
78.	Cowdery et al. (1996). "Bacterial DNA induces NK cells to produce IFN- $\gamma$ <i>in vivo</i> and increases the toxicity of lipopolysaccharides," <i>J. Immunol.</i> 156:4570-4575.		
79.	de Martino et al. (1999). "Low IgG3 and high IgG4 subclass levels in children with advanced human immunodeficiency virus-type 1 infection and elevated IgE levels," <i>Ann. Allergy Asthma Immunol.</i> 83:160-164.		
80.	Elkins et al., (1999) "Bacterial DNA comprising CpG motifs stimulates lymphocyte-dependent protection of mice against lethal infection with intracellular bacteria" <i>J. Immunol.</i> 162:2291-2298.		
EXAMINER: <u>MARC NAVARRO</u> DATE CONSIDERED: <u>12/29/03</u>			
EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.			

Form PTO-1449		Docket Number 377882001720	Application Number 09/927,884
<b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION</b> (Use several sheets if necessary)		Applicant Gary VAN NEST et al.	
		Filing Date: August 10, 2001	Group Art Unit 1645
		Mailing Date November 13, 2001	
81.	~	Elsayed et al. (1991). "The structural requirements of epitopes with IgE binding capacity demonstrated by three major allergens from fish, egg and tree pollen," <i>Scand. J. Clin. Lab. Invest.</i> 51(Suppl.204):17-31.	
82.	~	Fornadley, John (1998). "Allergy immunotherapy," <i>Otolaryngol. Clin. North Am.</i> 31:111-127.	
83.	~	Gao et al., (1995). "Circularization of oligonucleotides by disulfide bridge formation," <i>Nucleic Acids Res.</i> 23(11):2025-2029.	
84.	~	Geoghegan et al. (1992). "Site-directed conjugation of nonpeptide groups to peptides and proteins via periodate oxidation of a 2-amino alcohol. Application to modification at N-terminal serine," <i>Bioconjug. Chem.</i> 3:138-146.	
85.	~	Godard et al. (1995) "Antisense effects of cholesterol-oligodeoxynucleotide conjugates associated with poly(alkylcyanoacrylate) nanoparticles" <i>Eur. J. Biochem.</i> 232:404-410.	
86.	~	Goodchild, John (1990). "Conjugates of oligonucleotides and modified oligonucleotides: A review of their synthesis and properties" <i>Bioconjug. Chem.</i> 1(3):165-187.	
87.	~	Govorkova and Smirnov (1997). "Cross-protection of mice immunized with different influenza A (H2) strains and challenged with viruses of the same HA subtype," <i>Acta Virol.</i> 41:251-257.	
88.	~	Grabarek et al., "Zero-length crosslinking procedure with the use of active esters" (1990) <i>Anal. Biochem.</i> 185:131-135	
89.	~	Gramzinski et al., "Immune response to a hepatitis B DNA vaccine in aotus monkeys: A comparison of vaccine formulation, route, and method of administration" (1998) <i>Mol. Med.</i> 4:109-118	
90.	~	Granoff, Dan M. (1993). "Effect of immunity to the carrier protein on antibody responses to <i>Haemophilus influenzae</i> type b conjugate vaccines," <i>Vaccine</i> 11(1):S46-S51.	
91.	~	Haralambidis et al. (1990). "The synthesis of polyamide-oligonucleotide conjugate molecules," <i>Nucleic Acids Res.</i> 18:493-499.	
92.	~	Haralambidis et al. (1990). "The preparation of polyamide-oligonucleotide probes containing multiple non-radioactive labels," <i>Nucleic Acids Res.</i> 18:501-505.	
93.	~	Homer et al. (1998). "Rapid communication: Immunostimulatory DNA is a potent mucosal adjuvant," <i>Cell Immunol.</i> 190:77-82.	
94.	~	Jäger et al. (1988). "Oligonucleotide N-alkylphosphoramidates: Synthesis and binding to polynucleotides," <i>Biochem.</i> 27:7237-7246.	
95.	~	Jakob et al. (1998). "Activation of cutaneous dendritic cells by CpG-containing oligodeoxynucleotides: A role for dendritic cells in the augmentation of Th1 responses by immunostimulatory DNA," <i>J. Immunol.</i> 161:3042-3049.	
EXAMINER:		DATE CONSIDERED:	
MARK NAVARRO		12/29/03	
EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.			

Form PTO-1449

INFORMATION DISCLOSURE STATEMENT  
IN AN APPLICATION FOR A PATENT

(Use several sheets if necessary)

Docket Number 377882001720

Application Number 09/927,884

Applicant

Gary VAN NEST et al.

Filing Date: August 10, 2001

Group Art Unit 1645

Mailing Date November 13, 2001

96. Kandimalla, E.R. et al., (2001) "Effect of chemical modifications of cytosine and guanine in a CpG-motif of oligonucleotides: structure-immunostimulatory activity relationships" *Bioorg. Med. Chem.* 9:807-813.
97. Kataoka et al. (1992). "Antitumor activity of synthetic oligonucleotides with sequences from cDNA encoding proteins of *mycobacterium bovis* BCG," *Jpn. J. Cancer Res.* 83:244-247.
98. Kikuta, K. et al., (1990) "Cross-protection against influenza B type virus infection by intranasal inoculation of the HA vaccines combined with cholera toxin B subunit Vaccine 8:595-599
99. Kimura et al. (1994). "Binding of oligoguanylate to scavenger receptors is required for oligonucleotides to augment NK cell activity and induce IFN," *J. Biochem. (Tokyo)* 116:991-994.
100. Kline et al. (1997). "Immune redirection by CpG oligonucleotides conversion of a Th2 response to a Th1 response in a murine model of asthma," *J. Invest. Med.* 45(3):282A.
101. Klinman et al. (1996). "CpG motifs present in bacterial DNA rapidly induce lymphocytes to secrete interleukin 6, interleukin 12, and interferon  $\gamma$ ," *Proc. Natl. Acad. Sci. USA* 93:2879-2883.
102. Klinman et al., (1997). "Contribution of CpG motifs to the immunogenicity of DNA vaccines," *J. Immunol.* 158:3635-3639.
103. Kodihalli et al., (1997). "Cross-protection among lethal H5N2 influenza viruses induced by DNA vaccine to the hemagglutinin," *J. Virol.* 71(5):3391-3396.
104. Kovarik et al. (1999). "CpG oligodeoxynucleotides can circumvent the Th2 polarization of neonatal responses to vaccines but may fail to fully redirect Th2 responses established by neonatal priming," *J. Immunol.* 162:1611-1617.
105. Kremsky et al. (1987). "Immobilization of DNA via oligonucleotides containing an aldehyde or carboxylic acid group at the 5' terminus," *Nucleic Acids Res.* 15:2891-2909.
106. Krieg, Arthur M. (1996). "Lymphocyte activation by CpG dinucleotide motifs in prokaryotic DNA," *Trends in Microbiology* 4:73-77.
107. Krieg, Arthur M. (1998). "Leukocyte stimulation by oligodeoxynucleotides" Chapter 24 in *Applied Antisense Oligonucleotide Technology*. C.A. Stein et al. eds. Wiley-Liss, Inc.: pp. 431-448.
108. Krieg et al. (1989). "A role for endogenous retroviral sequences in the regulation of lymphocyte activation," *J. Immunol.* 143:2448-2451.
109. Krieg et al. (1995). "CpG motifs in bacterial DNA trigger direct B-cell activation" *Nature* 374:546-549.
110. Krieg et al. (1996). "Oligodeoxynucleotide modifications determine the magnitude of B cell stimulation by CpG motifs," *Antisense & Nucleic Acid Drug Dev.* 6:133-139.

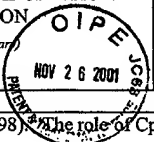
EXAMINER:

MARK NANNING

DATE CONSIDERED:

12/29/03

EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.

Form PTO-1449		Docket Number 377882001720	Application Number 09/927,884
INFORMATION DISCLOSURE CITATION IN AN APPLICATION (Use several sheets if necessary)		Applicant Gary VAN NEST et al.	
		Filing Date: August 10, 2001	Group Art Unit 1645
		Mailing Date November 13, 2001	
			
~	111.	Krieg et al., (1998) "The role of CpG dinucleotides in DNA vaccines" <i>Trends Microbiol.</i> 6:23-27	
~	112.	Krieg et al., "CpG DNA induces sustained IL-12 expression in vivo and resistance to <i>listeria monocytogenes</i> challenge" (1998) <i>J. Immunol.</i> 161:2428-2434	
~	113.	Krieg et al., "Sequence motifs in adenoviral DNA block immune activation by stimulatory CpG motifs" (1998) <i>Proc. Natl. Acad. Sci. USA</i> 95:12631-12636	
~	114.	Krieg et al., (1999) "CpG DNA: a novel immunomodulator" <i>Trends Microbiol.</i> 7(2):64-65.	
~	115.	Latimer et al., "Specificity of monoclonal antibodies produced against phosphorothioate and ribo modified DNAs" (1995) <i>Mol. Immunol.</i> 32:1057-1064	
~	116.	Lea et al., "Cloning and sequencing of cDNAs encoding the human sperm protein, Sp17" (1996) <i>Biochim. Biophys. Acta</i> 1307:263-266	
~	117.	Leclerc et al., (1997) "The preferential induction of a TH1 immune response by DNA-based immunization is mediated by the immunostimulatory effect of plasmid DNA" <i>Cell. Immunol.</i> 179:97-106.	
~	118.	Liang, Hua et al. (1996). "Activation of human B cells by phosphoroghoate oligodeoxynucleotides," <i>J. Clin. Invest.</i> 98(5):1119-1129.	
~	119.	Lipford et al., "Immunostimulatory DNA: sequence-dependent production of potentially harmful or useful cytokines" (1997) <i>Eur. J. Immunol.</i> 27:3420-3426.	
~	120.	Lipford et al., "CpG-containing synthetic oligonucleotides promote B and cytotoxic T cell responses to protein antigen: a new class of vaccine adjuvants" (1997) <i>Eur. J. Immunol.</i> 27:2340-2344	
~	121.	Liu et al., "Immunostimulatory CpG oligodeoxynucleotides enhance the immune response to vaccine strategies involving granulocyte-macrophage colony-stimulating factor" (1998) <i>Blood</i> 92:3730-3736	
~	122.	Macfarlane et al., "Ummethylated CpG-containing oligodeoxynucleotides inhibit apoptosis in WEHI 231 B lymphocytes induced by several agents: evidence for blockade of apoptosis at a distal signalling step" (1997) <i>Immunology</i> 91:586-593	
~	123.	Malley, Arthur, "The immune response of offspring mice from mothers immunized during pregnancy with protein antigens" (1989) <i>J. Reprod. Immunol.</i> 16:173-186	
~	124.	Manzel et al., (1999) "Lack of immune stimulation by immobilized CpG-oligodeoxynucleotide" <i>Antisense Nucl. Acid Drug Dev.</i> 9:459-464.	
~	125.	Martin-Orozco et al., "Enhancement of antigen-presenting cell surface molecules involved in cognate interactions by immunostimulatory DNA sequences" (1999) <i>Intl Immunol.</i> 11(7):1111-1118	
~	126.	Mbawuike et al., "Influenza: A subtype cross-protection after immunization of outbred mice with a purified chimeric NS <sub>1</sub> /HA <sub>2</sub> influenza virus protein" (1994) <i>Vaccine</i> 12(14):1340-1348	
EXAMINER: MARC NAVAREDO		DATE CONSIDERED: 12/29/03	
EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.			



Form PTO-1449

INFORMATION DISCLOSURE CITATION  
IN AN APPLICATION

(Use several sheets if necessary)

Docket Number 377882001720

Application Number 09/927,884

Applicant

Gary VAN NEST et al.

Filing Date: August 10, 2001

Group Art Unit 1645

Mailing Date November 13, 2001

- |      |  |
|------|--|
| 127. | McCluskie et al., "Cutting Edge: CpG DNA is a potent enhancer of systemic and mucosal immune responses against hepatitis B surface antigen with intranasal administration to mice" (1998) <i>J. Immunol.</i> 161(9):4463-4466                              |
| 128. | Miller et al., "Syntheses and properties of adenine and thymine nucleoside alkyl phosphotriesters, the neutral analogs of dinucleoside monophosphates" (1971) <i>JACS</i> 93:6657-6665   |
| 129. | Mitragotri et al., "Ultrasound-mediated transdermal protein delivery" (1995) <i>Science</i> 269:850-853  |
| 130. | Mojcik et al., "Administration of a phosphorothioate oligonucleotide antisense to murine endogenous retroviral MCF <i>env</i> causes immune effects <i>in vivo</i> in a sequence-specific manner" (1993) <i>Clin. Immuno. and Immunopathol.</i> 67:130-136 |
| 131. | Moldoveanu et al., "CpG DNA, a novel immune enhancer for systemic and mucosal immunization with influenza virus" (1998) <i>Vaccine</i> 16:1216-1224  |
| 132. | Nelson et al. (1989) "A new and versatile reagent for incorporating multiple primary aliphatic amines into synthetic oligonucleotides" <i>Nucleic Acids Res.</i> 17(18):7179-7186.   |
| 133. | Nelson et al., "N3'→P5' oligodeoxyribonucleotide phosphoramidates: A new method of synthesis based on a phosphoramidite amino-exchange reaction," (1997) <i>J. Org. Chem.</i> 62:7278-7287.  |
| 134. | O'Shannessy et al., "Specific conjugation reactions of the oligosaccharide moieties of immunoglobulins" (1985) <i>J. Applied Biochem.</i> 7:347-355  |
| 135. | Pertmer et al., "Influenza virus nucleoprotein-specific immunoglobulin G subclass and cytokine responses elicited by DNA vaccination are dependent on the route of vector DNA delivery" (1996) <i>J. Virol.</i> 70:6119-6125                               |
| 136. | Peyrottes et al., "Oligodeoxynucleoside phosphoramidates (P-NH <sub>2</sub> ): synthesis and thermal stability of duplexes with DNA and RNA targets" (1996) <i>Nucleic Acids Res.</i> 24:1841-1848   |
| 137. | Pisetsky, David S., "The immunologic properties of DNA" (1996a) <i>J. Immunol.</i> 156:421-423   |
| 138. | Pisetsky, David S., "Immune activation by bacterial DNA: A new genetic code" (1996b) <i>Immunity</i> 5:303-310   |
| 139. | Pisetsky et al., "Stimulation of murine lymphocyte proliferation by a phosphorothioate oligonucleotide with antisense activity for herpes simplex virus" (1994) <i>Life Sci.</i> 54:101-107  |
| 140. | Pisetsky et al., "Immunological properties of bacterial DNA" DNA vaccines: A new era in vaccinology" (1995) <i>Ann. N.Y. Acad. Sci.</i> , 772:152-163  |
| 141. | Rafnar et al., "Cloning of <i>Amb a I</i> (antigen E), the major allergen family of short ragweed pollen" (1991) <i>J. Biol. Chem.</i> 266:1229-1236   |
| 142. | Raz et al., "Intradermal gene immunization: The possible role of DNA uptake in the induction of cellular immunity to viruses" (1994) <i>Proc. Natl. Acad. Sci. USA</i> 91:9519-9523  |

EXAMINER:

MARK NAVAREDO

DATE CONSIDERED:

12/29/03

EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.

Form PTO-1449

INFORMATION DISCLOSURE CITATION  
IN AN APPLICATION

(Use several sheets if necessary)

Docket Number 377882001720

Application Number 09/927,884

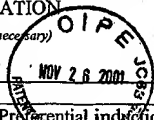
Applicant

Gary VAN NEST et al.

Filing Date: August 10, 2001

Group Art Unit 1645

Mailing Date: November 13, 2001



- |      |  |
|------|--|
| 143. | Raz et al., "Preferential induction of a Th <sub>1</sub> immune response and inhibition of specific IgE antibody formation by plasmid DNA immunization" (1996) <i>Proc. Natl. Acad. Sci. USA</i> 93:5141-5145                                      |
| 144. | Redford et al., "Cyclosporin A enhances IL-12 production by CpG motifs in bacterial DNA and synthetic oligodeoxynucleotides" (1998) <i>J. Immunol.</i> 161:3930-3935   |
| 145. | Rogers et al., "Recombinant <i>Fel d I</i> : Expression, purification, IgE binding and reaction with cat-allergic human T cells" (1993) <i>Mol. Immunol.</i> 30:559-568  |
| 146. | Roget et al., "Synthesis and use of labelled nucleoside phosphoramidite building blocks bearing a reporter group: biotinyl, dinitrophenyl, pyrenyl and dansyl" (1989) <i>Nucleic Acids Res.</i> 17:7643-7651                                       |
| 147. | Romagnani, S. (2000) "T-cell subsets (Th1 versus Th2) <i>Ann. Allergy Asthma Immunol.</i> 85:9-18.   |
| 148. | Roman et al., "Immunostimulatory DNA sequences function as T helper-1-promoting adjuvants" (1997) <i>Nature Medicine</i> 3:849-854   |
| 149. | Ruth, Jerry L., "Oligodeoxynucleotides with reporter groups attached to the base" (1991) <i>Oligonucleotides and Analogues: A Practical Approach</i> , Eckstein, ed., IRL Press, pp. 255-282   |
| 150. | Sato et al., "Immunostimulatory DNA sequences necessary for effective intradermal gene immunization" (1996) <i>Science</i> 273:352-354   |
| 151. | Schacht et al., (1996) "Biomedical applications of degradable polyphosphazenes" <i>Biotechnol. Bioeng.</i> 52:102-108.   |
| 152. | Scherle et al., "Functional analysis of influenza specific helper T cell clones <i>in vivo</i> " (1986) <i>J. Exp. Med.</i> 164:1114-1128  |
| 153. | Scherle et al., "Differential ability of B cells specific for external vs. internal influenza virus proteins to respond to help from influenza virus-specific T-cell clones <i>in vivo</i> " (1988) <i>Proc. Natl. Acad. Sci. USA</i> 85:4446-4450 |
| 154. | Schultz et al., "Oligo-2'-fluoro-2'-deoxynucleotide N3'→P5' phosphoramidates: synthesis and properties" (1996) <i>Nucleic Acids Res.</i> 24:2966-2973  |
| 155. | Schwartz et al., "CpG motifs in bacterial DNA cause inflammation in the lower respiratory tract" (1997) <i>J. Clin. Invest.</i> 100:68-73  |
| 156. | Shimada et al., "In vivo augmentation of natural killer cell activity with a deoxyribonucleic acid fraction of BCG" (1986) <i>Jpn. J. Cancer Res.</i> 77:808-816   |
| 157. | Sinha et al., "Oligonucleotides with reporter groups attached to the 5'-terminus" (1991) <i>Oligonucleotide Analogues: A Practical Approach</i> , Eckstein, ed., IRL Press, pp. 185-210  |

EXAMINER:

MARK NAVARRO

DATE CONSIDERED:

12/29/03

EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.

Form PTO-1449		Docket Number 377882001720	Application Number 09/927,884
<b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION</b> (Use several sheets if necessary)		Applicant Gary VAN NEST et al.	
		Filing Date: August 10, 2001	Group Art Unit 1645
		Mailing Date November 13, 2001	
158.	Sonehara et al., "Hexamer of anandromic oligonucleotides with 5'-CG-3' motif(s) induce production of interferon" (1996) <i>J. Interferon and Cytokine Res.</i> 16:799-803		
159.	Sparwasser et al., "Macrophages sense pathogens via DNA motifs: induction of tumor necrosis factor- $\alpha$ -mediated shock" (1997) <i>Eur. J. Immunol.</i> 27:1671-1679		
160.	Spiegelberg et al., "Inhibition of IgE formation and allergic inflammation by allergen gene immunization and by CpG motif immunostimulatory oligodeoxynucleotides" (1998) <i>Allergy</i> 53:93-97		
161.	Spiegelberg et al., "Inhibition of allergic inflammation in the lung by plasmid DNA allergen immunization" (1999) <i>Pediatric Pulmonology Suppl.</i> 18:118-121		
162.	Stacey et al., "Macrophages ingest and are activated by bacterial DNA" (1996) <i>J. Immunol.</i> 157:2116-2122		
163.	Staros et al., "Enhancement by <i>N</i> -hydroxysulfosuccinimide of water-soluble carbodiimide-mediated coupling reactions" (1986) <i>Anal. Biochem.</i> 156:220-222.		
164.	Stein et al., "Chapter 11: Non-antisense effects of oligodeoxynucleotides" (1997) <u>Antisense Technology</u> , C. Lichtenstein and W. Nellen, eds., IRL Press, pp. 241-264.		
165.	Stirchak et al., "Uncharged stereoregular nucleic acid analogs: 2. Morpholino nucleoside oligomers with carbamate internucleoside linkages" (1989) <i>Nucleic Acids Res.</i> 17:6129-6141		
166.	Tamura et al., "Superior cross-protective effect of nasal vaccination to subcutaneous inoculation with influenza hemagglutinin vaccine" (1992) <i>Eur. J. Immunol.</i> 22:477-481		
167.	Tamura et al., "Formulation of inactivated influenza vaccines for providing effective cross-protection by intranasal vaccination in mice" (1994) <i>Vaccine</i> 12:310-316		
168.	Tokunaga et al., "Synthetic oligonucleotides with particular base sequences from the cDNA encoding proteins of <i>Mycobacterium bovis</i> BCG induce interferons and activate natural killer cells" (1992) <i>Microbiol. Immunol.</i> 36:55-66		
169.	Tung et al., "Preparation of oligonucleotide-peptide conjugates" (1991) <i>Bioconjug. Chem.</i> 2:464-465		
170.	Verhelvi, D. et al., (February 15, 2001) "Human peripheral blood cells differentially recognize and respond to two distinct CpG motifs" <i>J. Immunol.</i> 166(4):2372-2377.		
171.	Wang et al., "Circular RNA oligonucleotides. Synthesis, nucleic acid binding properties, and a comparison with circular DNAs" (1994) <i>Nucleic Acids Res.</i> 22:2326-2333		
172.	Warner et al., "Laboratory methods. Construction and evaluation of an instrument for the automated synthesis of oligodeoxyribonucleotides" (1984) <i>DNA</i> 3:401-411		
173.	Weeratna et al. (1998) "Brief Communication: Reduction of antigen expression from DNA vaccines by coadministered oligodeoxynucleotides" <i>Antisense &amp; Nucleic Acid Drug Development</i> 8:351-356.		
EXAMINER: MARK NAVERO		DATE CONSIDERED: 12/29/03	
EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.			

Form PTO-1449		Docket Number 377882001720	Application Number 09/927,884
INFORMATION DISCLOSURE IN AN APPLICATION (Use several sheets if necessary)		Applicant	
		Gary VAN NEST et al.	
		Filing Date: August 10, 2001	Group Art Unit 1645
		Mailing Date November 13, 2001	

- |   |      |   |
|---|------|---|
| ~ | 174. | Weiner et al., "Immunostimulatory oligodeoxynucleotides containing the CpG motif are effective as immune adjuvants in tumor antigen immunization" (1997) <i>Proc. Natl. Acad. Sci. USA</i> 94:10833-10837   |
| ~ | 175. | Widhe, M. et al. (1998). "IgG subclasses in lyme borreliosis: A study of specific IgG subclass distribution in an interferon- $\gamma$ -predominated disease," <i>Scand. J. Immunol.</i> 47:575-581.  |
| ~ | 176. | Wooldridge et al., "Immunostimulatory oligodeoxynucleotides containing CpG motifs enhance the efficacy of monoclonal antibody therapy of lymphoma" (1997) <i>Blood</i> 89:2994-2998   |
| ~ | 177. | Yamamoto et al., "Unique palindromic sequences in synthetic oligonucleotides are required to induce INF and augment INF-mediated natural killer activity" (1992) <i>J. Immunol.</i> 148:4072-4076   |
| ~ | 178. | Yamamoto et al. (1994) "Ability of oligonucleotides with certain palindromes to induce interferon production and augment natural killer cell activity is associated with their base length" <i>Antisense Research and Development</i> 4:119-122.      |
| ~ | 179. | Yamamoto et al., "Synthetic oligonucleotides with certain palindromes stimulate interferon production of human peripheral blood lymphocytes <i>in vitro</i> " (1994) <i>Jpn. J. Cancer Res.</i> 85:775-779  |
| ~ | 180. | Yanagawa et al., "Analysis of superhelical structures of nucleic acid-lipid conjugates by image processing" (1988) <i>Nucleic Acids Symp. Series</i> 19:189-192.  |
| ~ | 181. | Yi et al. (1996) "IFN- $\gamma$ promotes IL-6 and IgM secretion in response to CpG motifs in bacterial DNA and oligonucleotides" <i>J. Immunol.</i> 156:558-564   |
| ~ | 182. | Yi et al., "CpG DNA rescue from anti-IgM-induced WEHI-231 B lymphoma apoptosis via modulation of I $\kappa$ B $\alpha$ and I $\kappa$ B $\beta$ and sustained activation of nuclear factor- $\kappa$ B/c-Rel" (1998) <i>J. Immunol.</i> 160:1240-1245 |
| ~ | 183. | Yi et al., "CpG motifs in bacterial DNA activate leukocytes through the pH-dependent generation of reactive oxygen species" (1998) <i>J. Immunol.</i> 160:4755-4761   |
| ~ | 184. | Yi et al., "CpG oligodeoxynucleotides rescue mature spleen B cells from spontaneous apoptosis and promote cell cycle entry" (1998) <i>J. Immunol.</i> 160:5898-5906   |
| ~ | 185. | Yi et al., "Cutting edge: Rapid induction of mitogen-activated protein kinases by immune stimulatory CpG DNA" (1998) <i>J. Immunol.</i> 161:4493-4497   |
| ~ | 186. | Zhao et al., "Effect of different chemically modified oligodeoxynucleotides on immune stimulation" (1996) <i>Biochem. Pharmacol.</i> 51:173-182   |
| ~ | 187. | Zon, Gerald, "Oligonucleoside phosphorothioates" Protocols for Oligonucleotides and Analogs, Chapter 8 in <i>Methods in Molecular Biology</i> , Volume 20 (1993) pp. 165-189  |

EXAMINER:

MARK NAVARRO

DATE CONSIDERED:

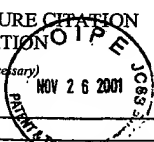
12/29/03

EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.

Form PTO-1449

INFORMATION DISCLOSURE CITATION  
IN AN APPLICATION

(Use several sheets if necessary)



Docket Number 377882001720

Application Number 09/927,884

Applicant

Gary VAN NEST et al.

Filing Date: August 10, 2001

Group Art Unit 1645

Mailing Date November 13, 2001

- |      |  |
|------|--|
| 188. | Zimmermann et al., "Cutting edge: CpG oligodeoxynucleotides trigger protective and curative Th1 responses in lethal murine leishmaniasis" (1998) <i>J. Immunol.</i> 3627-3630      |
| 189. | Zuckermann et al., "Efficient methods for attachment of thiol specific probes to the 3'-ends of synthetic oligodeoxyribonucleotides" (1987) <i>Nucleic Acids Res.</i> 15:5305-5321 |

EXAMINER:

MARK NAVARRO

DATE CONSIDERED:

12/29/03

EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.